

TAGASASTE IN THE CANARY ISLANDS IN THE 17TH CENTURY

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Abstract

A reference found in Archivo Histórico Nacional (Madrid) to a place called "Hoya del Tagasaste" ("Tagasaste Pit") on the island of El Hierro for the year 1659, could represent the oldest known quotation on typical tagasaste (*Chamaecytisus proliferus* (L. fil.) Link ssp. *proliferus* var. *palmensis* (Christ) Hansen & Sunding) in the Canary Islands. Ecogeographical studies have suggested that tagasaste is endemic to the island of La Palma. Therefore this finding indicates that either tagasaste was introduced from La Palma as a cultivated species earlier than it was previously believed or that it refers to another endemic *Chamaecytisus* of El Hierro (escobon of El Hierro = *C. proliferus* ssp. *proliferus* var. *hierrensis* (Pitard) J.R. Acebes) which is now known as "tagasaste salvaje" (wild tagasaste) or "tagasaste de risco" (cliff tagasaste) by peasant farmers of this island.

Introduction

Tagasaste (*Chamaecytisus proliferus* (L. fil.) Link ssp. *proliferus* var. *palmensis* (Christ) Hansen & Sunding) is a fodder shrub which is endemic to the island of La Palma in the Canary Islands. Together with six other morphological types, it forms a species complex endemic to the Canary Islands (Table 1).

The word "tagasaste" is regarded as having a Berber derivation (Wolfel, 1965, p. 445), and Foucauld (1940, p. 85; 1951, p. 489) reported the use by the native people of northern Africa of the Berber word "tagest" for either a grass with thick leaves or for any perennial species. In the late 16th Century, Frutuoso (1590, p. 121) reported the occurrence in La Palma of a bush known as "tagetes" which could have referred to the actual tagasaste endemic to this island.

The younger Linnaeus (1781, p. 328) gave the first botanical description of *C. proliferus* as *Cytisus proliferus*, and this was based on material gathered in Tenerife by the British plant collector F. Masson (Linnaeus fil., 1781, pp. 27, 328). The work of the younger Linnaeus in 1781 produced the first type description for the *C. proliferus* complex. However, in 1694 and 1696 the British herbalist Leonard Plukenet reported as *Cytisus arboreus Canariensis*, what appear to have been plants of white escobon of Tenerife (Plukenet, 1694, tab. 277; 1696, p. 128). This English botanist reported it as a *Cytisus*, not previously described, from the Canary Islands, which had white flowers and sericeous leaves and which was known as "texo" by the natives of the archipelago (Fig. 1A). A voucher from Plukenet's herbarium (Fig. 1B) at the British Natural History Museum (BM) (Sloane Herbarium Vol. 96) is of white escobon of Tenerife and is very similar to the plant illustrated in his work from 1694. Although the specimen illustrated in Figure 1A is not from a plant of typical tagasaste, it represents the oldest known dried specimen of a morphological form of the *C. proliferus* complex.

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Figure 1: Plukenet's illustration (pointed in A) of 1696 is believed to be the oldest published reference concerning *Chamaecytisus proliferus* from the Canary Islands. It refers to a plant of white escobon of Tenerife (pointed in B) found in Plukenet's herbarium (BM, Sloane Herbarium Vol. 96, page 2). Courtesy of Department of Botany, British Museum (Natural History).

The first reports on the cultivation and use of typical tagasaste in La Palma were given by Pérez (1862) who has also been considered as the first person to propagate tagasaste from this island (Pérez-Ventoso, 1892). Furthermore, Francisco-Ortega et al. (1991) suggested that it was likely that the oldest reference on tagasaste came from an undated herbarium specimen held in the Herbarium Webbianum in Florence (FI). The label of this specimen states that plants of *C. proliferus* from La Palma were known as tagasaste. Moreover the handwriting on this label appears to be that of the botanist P.B. Webb (C. Nepi pers. comm.) which means that it could have been mounted between Webb's stay in the Canary Islands in 1828 and his death in 1854 (Stearn, 1937).

Díaz-Padilla & Rodríguez-Yanes (1990, p. 217), in their work concerning the history of the islands of La Gomera and El Hierro from the conquest until the 18th century, claimed that in the Archivo Histórico Nacional (AHN) in Madrid, there was a reference dated 1659 to a location on the island of El Hierro named "Hoya del Tagasaste" ("Tagasaste Pit" = "Tagasaste Depression"). They mentioned that the reference was found in the book 2557, sheets 455 and 516 of the "sección del clero" (clergy section) of the AHN.

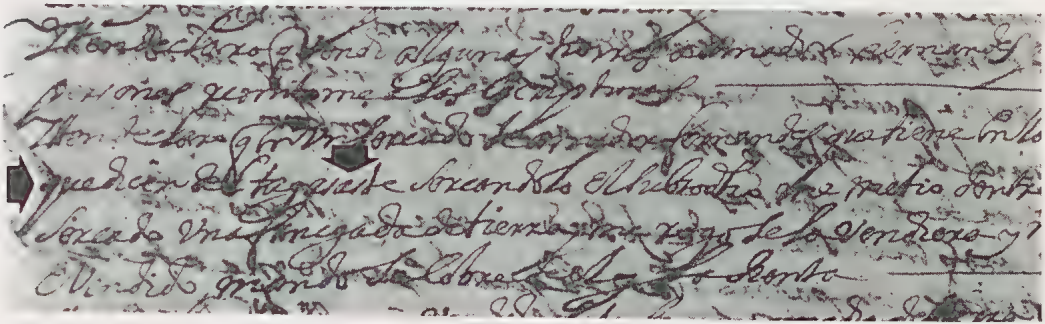


Figure 2: Page of the will of Hernando Díaz de Aguiar (AHN, Book 2557, reverse side of sheet 458, Sección del Clero) from 1659 where the oldest known reference to tagasaste (pointed) in the Canary Islands is found. Courtesy of Archivo Histórico Nacional, Madrid, Spain.

As the work of Díaz-Padilla & Rodríguez-Yanes (1990) was concerned mainly with the history of these two islands they did not discuss the possible relevance of this finding to the history of tagasaste as a cultivated species. We therefore aim to confirm that this is the oldest known reference on tagasaste, and to provide a brief discussion on the possible occurrence of this fodder legume in the island of El Hierro.

Details of the earliest description

The earliest known evidence for the use of the word tagasaste is found in documents held at AHN, and refers to a locality of the island of El Hierro. An extract of this document is illustrated in Figure 2 which clearly indicates that a place from this island received the name of "Hoya del Tagasaste" ("Tagasaste Pit") in 1659. It is found on the reverse side of sheet 458, in book 2557 of the clergy section, and it is part of the will of Hernando Díaz Aguiar. The locality "Hoya del Tagasaste" is mentioned twice on this page. Line 14 from this page states that this part of the will refers to the island of El Hierro. The whole document was written on March 20th, 1659 and is six pages long, from sheet 455 to sheet 460. On lines 21 and 22 of the reverse side of page 458 it is stated "... declaro que en un cercado de Amador Fernández que tiene en la hoya que dicen del tagasaste..." (... I declare that in a place of Amador Fernández which is located in the pit which is known as tagasaste...), furthermore on line 31 from the same page, is stated "...por haber puesto los linderos en la hoya del tagasaste..." (...because the boundaries

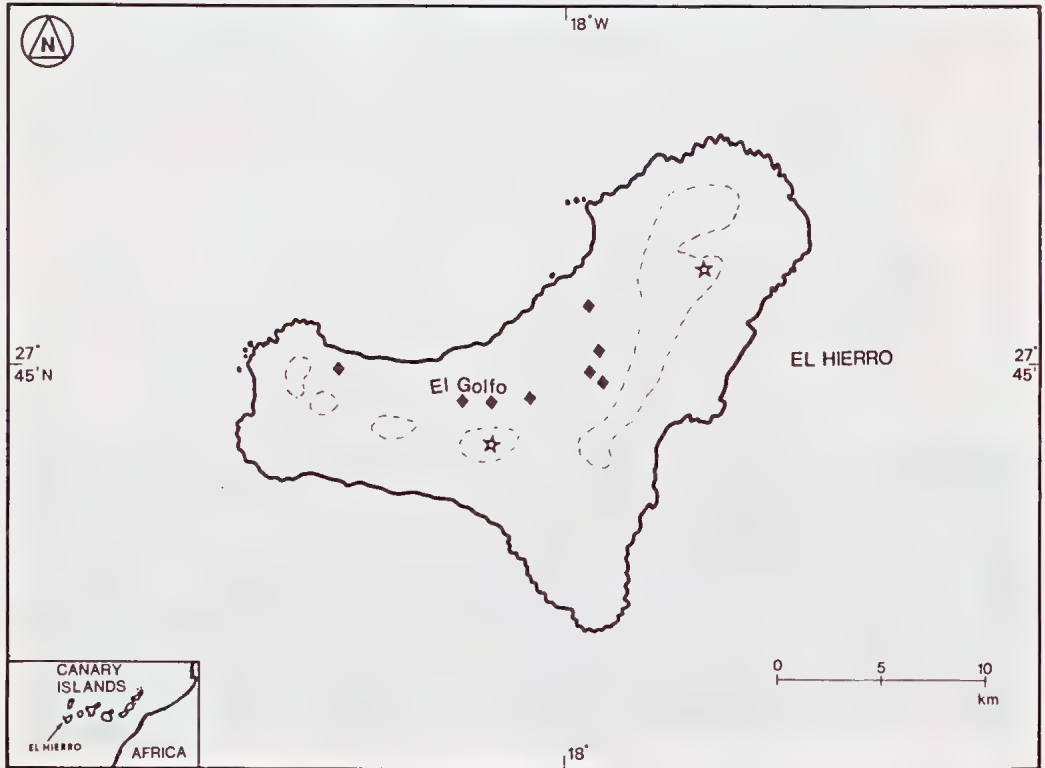


Figure 3: Map of the island of El Hierro showing the distribution of cultivated tagasaste inside the marked areas (---); localities where *C. proliferus* var. *hierrensis* is reported (◆); and location of the two places which nowadays receive the name of "Hoya del Tagasaste" (★). Adapted from Pérez de Paz et al. (1986) and Francisco-Ortega (1992).

were established in tagasaste pit..). It is also stated (line 27) that this locality was close to a place known as "Los Cercaditos de Marco Antonio". The fact that this reference is recorded in a will, which can be regarded as an official document, suggests a degree of authenticity. Although Díaz-Padilla & Rodríguez-Yanes (1990) indicated that references to "Hoya del Tagasaste" could be found on sheets 455 and 516, it is not recorded on these two pages. Furthermore sheet 516 is part of another will of Leonor Peraza. Although we have not found any locality with the names of "Hoya del Tagasaste" or "Los Cercaditos de Marco Antonio" on any known maps of El Hierro, J.R. Acebes-Ginovés (pers. comm.) has stated that there are at least two places in the island known as "Hoya del Tagasaste" (Fig. 3). One is found in El Julan, in the south, and the other on the eastern plateau of San Andrés. Both localities are outside the recognised distribution range of escobon of El Hierro (*C. proliferus* ssp. *proliferus* var. *hierrensis*) but they are within the present zone of cultivated tagasaste (Fig. 3).

Despite the fact that the word tagasaste is commonly used in the archipelago for *C. proliferus* var. *palmensis*, peasant farmers from El Hierro also know escobon of El Hierro as "tagasaste salvaje" (wild tagasaste) or "tagasaste de risco" (cliff tagasaste) (Table 1 gives a summary of common names of *C. proliferus* from the Canary Islands) which means that the locality "Hoya del Tagasaste" could be related to *C. proliferus* var. *hierrensis*, and that it might have been found in an area closer to El Golfo cliffs where this species exists today (Fig. 3). This morphological form only occurs in this region and it is not cultivated.

Morphological form	Spanish common name	Geographical region
<i>C. proliferus</i> ssp. <i>proliferus</i> (White escobon of Tenerife)	Escobón blanco	Northern Tenerife
	Escobón	Northern Tenerife
	Escobón de monte	Northern Tenerife
<i>C. proliferus</i> ssp. <i>proliferus</i> var. <i>canariae</i> (White escobon of Gran Canaria)	Escobón blanco	Northern Gran Canaria
<i>C. proliferus</i> ssp. <i>proliferus</i> var. <i>palmensis</i> (Typical tagasaste)	Tagasaste	La Palma, Tenerife, Gran Canaria, El Hierro and La Gomera
	Tagasaste negro	Caldera de Taburiente (La Palma)
	Tasagaste	La Palma and Gran Canaria
	Satagastate	La Palma and Gran Canaria
	Escobón negro	Gran Canaria
<i>C. proliferus</i> ssp. <i>proliferus</i> var. <i>calderae</i> (White tagasaste)	Tagasaste blanco	Caldera de Taburiente (La Palma)
	Tagasaste azul	Northern La Palma
<i>C. proliferus</i> ssp. <i>proliferus</i> var. <i>hierrensis</i> (Escobon of El Hierro)	Tagasaste salvaje	El Hierro
	Tagasaste de risco	El Hierro
	Escobón	El Hierro
<i>C. proliferus</i> ssp. <i>angustifolius</i> (Narrow-leaved escobon)	Escobón	Tenerife
	Tagasaste criollo	La Gomera
	Tagasaste	La Gomera
<i>C. proliferus</i> ssp. <i>meridionalis</i> (Escobon of southern Gran Canaria)	Escobón	Southern Gran Canaria

Table 1: Spanish common local names for the seven forms of *C. proliferus* in the Canary Islands after Santos-Guerra (1983), Pérez de Paz et al. (1986), Acebes-Ginovés (1990) and Francisco-Ortega (1992). Farmers from La Palma know as "tagasaste mollar" a form of white tagasaste or typical tagasaste which is easier to prune. Farmers from northern Gran Canaria call "escobón mulato" plants that seem to be hybrids between typical tagasaste and white escobon of Gran Canaria. Forms of typical tagasaste with larger leaves are known as "tagasaste hembra" or "tagasasta" whilst forms with small leaves are known as "tagasaste macho" in La Palma. *Ephedra fragilis* (Ephedraceae), in La Palma, and *Spartocytisus filipes* (Fabaceae), in La Palma and La Gomera, are also called escobón. Note that the word tagasaste is not used in the archipelago to name any other species from the Canary Islands.

If this locality really refers to an area where typical tagasaste used to be cultivated, it would mean firstly that it was introduced from La Palma earlier than it was previously believed and that Dr Victor Pérez was not the first person to propagate tagasaste from this island (Francisco-Ortega et al., 1991), and secondly that the species has been under cultivation from the 17th century despite the fact that none of the botanists from the 16th-18th century reported tagasaste as a cultivated species in the Canary Islands (Francisco-Ortega et al., 1991).

Whether this locality represents the occurrence of *C. proliferus* var. *palmensis* or *C. proliferus* var. *hierrensis* cannot be ascertained at present. However, we are convinced that the word tagasaste found in this document from AHN refers to one of the morphological forms of *C. proliferus*; this word *has never* been used either by any botanist or by local people to refer to another species from the Canary Island flora. It is likely that further research in this or other archives will provide more information concerning the cultivation and use of this fodder species by peasant farmers in the Canary Islands before 1862. For now this should be considered as the earliest reference on the occurrence of this endemic species in the Canary Islands.

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References

- Acebes-Ginovés, J.R. (1990). "Contribución al estudio de los géneros *Chamaecytisus* Link y *Dorycnium* Mill. en el archipiélago canario". (Ph.D. thesis, Universidad de La Laguna: La Laguna, Tenerife).
- Díaz-Padilla, G. & Rodríguez-Yanes, J.M. (1990). "El señorío en Las Canarias Occidentales: La Gomera y El Hierro hasta 1700". (Cabildo Insular de El Hierro, Cabildo Insular de La Gomera).
- Foucauld, P.C. de (1940). "Dictionaire abrégé Touareg-Francais de noms propres". (André Basset La Rose).
- Foucauld, P.C. de (1951). "Dictionaire Touareg-Francais", vol. 1. (Imprimerie Nationale de France).
- Francisco-Ortega, J. (1992). "An ecogeographical study within the *Chamaecytisus proliferus* (L. fil.) Link complex (Fabaceae: Genisteae) in the Canary Islands". (Ph.D. thesis, The University of Birmingham: Birmingham).
- Francisco-Ortega, J.; Jackson, M.T.; Santos-Guerra, A. & Fernández-Galván, M. (1990). Genetic resources of the fodder legumes tagasaste and escobon (*Chamaecytisus proliferus* (L. fil.) Link *sensu lato*) in the Canary Islands. *FAO/IBPGR Plant Genetic Resources Newsletter* 81/82: 27-32.
- Francisco-Ortega, J.; Jackson, M.T.; Santos-Guerra, A. & Fernández-Galván, M. (1991). Historical aspects of the origin and distribution of tagasaste (*Chamaecytisus proliferus* (L. fil.) Link *ssp. palmensis* (Christ) Kunkel), a fodder tree from the Canary Islands. *J.Adelaide Bot.Gard.* 14: 67-76.
- Frutuoso, G. (1590). "Las Islas Canarias (de Saudades da terra) traducción de la obra escrita en 1590 por E. Serra, J. Régulo y S. Petra". (Instituto de Estudios Canarios: La Laguna, Tenerife).
- Linnaeus, C. fil. (1781). "Supplementum plantarum systematis vegetabilium". (Impensis Orphanotrophi: Braunschweig).
- Pérez, V. (1862). Agricultura. *El Guanche* 294.
- Pérez-Ventoso, J.V. (1892). "Le tagasaste (*Cytisus proliferus* varietas) fourrage important". (Semaine Medicale: Paris).
- Pérez de Paz, P.L.; Arco M. del; Acebes-Ginovés, J.R. & Wildpret, W. (1986). "Leguminosas forrajeras de Canarias". (Cabildo Insular de Tenerife: Santa Cruz de Tenerife).
- Plukenet, L. (1694). "Phytographia sive stirpium illustriorum et minus cognitarum, pars quarta". (London).
- Plukenet, L. (1696). "Almagestum botanicum sive phytographiae pluc'netianae onomasticon methodo synthetica digestum". (London).
- Santos-Guerra, A. (1983). "Vegetación y flora de La Palma". (Interinsular Canaria: Santa Cruz de Tenerife).
- Stearn, W.T. (1937). On the dates of publication of Webb and Berthelot's "Histoire naturelle des Iles Canaries". *J.Soc.Bibl.Nat.Hist.* 1: 49-63.
- Wolfel, D.J. (1965). "Monumenta linguae canariae". (Akademische Druck Velagsantalt: Graz).